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# Inferring Party Positions across Issue Dimensions

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## Abstract

In this article, we argue that voters use party positions on an issue dimension as a heuristic device to locate parties on other dimensions on which they have less information about. We confirm our argument by fielding two survey experiments in a context, Catalonia, where political competition is structured along two main issue dimensions: an economic (left vs right) dimension and a national-territorial (Spanish vs Catalan) dimension. We find that the position of a hypothetical candidate on the national dimension exerts a great deal of influence on where respondents locate him on the left-right dimension, but that the left-right position does not affect the perceived placement on the national divide. This asymmetry can be partly explained by the different nature of these issue domains, and specifically by the distinct ability of the national dimension to activate social group cues that give rise to projection biases. These findings have important implications for our understanding of issue misperceptions and of the strategic choices available to parties in multidimensional policy spaces. The nature of the issue dimension could facilitate why some issue dimensions tend to function as cue givers and others as cue receivers. We discuss the implications of our findings in constraining the strategies available to parties in multidimensional contexts.

Keywords: Party competition; Issue alignment; Projection bias; Stereotypes; Catalonia

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# 1. Introduction

Finding information about parties' stands on issues is not an easy task for the typical voter. While this is common to all political landscapes, it is particularly true in more complex multidimensional policy spaces where more than one salient political dimension produces a vaster political space and a more fragmented party system (Sartori, 1976). To determine where political actors stand on these dimensions, voters often rely on heuristic sources as diverse as party affiliation, the candidate's membership in social groups (McGraw, 2011), or signals produced by coalition arrangements, among others.

However, a largely overlooked shortcut of parties and candidates' issue positions is their own position on other issue dimensions. This is a particularly striking omission given the increasingly multidimensional configuration of political competition in Western democracies (Albright, 2010; Kriesi et al., 2006; Marks et al., 2006; Vries and Marks, 2012).

In this article, we explore how voters use the parties' position on some issue dimensions to infer their position on issues pertaining to other dimensions. We argue that a position on one dimension may serve as a heuristic device for voters when they need to locate a party on some other dimension on which they have less, or no directly relevant, information. In this heuristic processing, moreover, we expect voters' evaluations to be subject to projection biases (assimilation and contrast) that are well known to the spatial voting literature (Granberg et al., 1988; Grand and Tiemann, 2013; Judd et al., 1983; Krosnick, 1990).

We test our arguments using two survey experiments fielded in Catalonia, a polity in which both parties and voters tend to locate themselves in a two-dimensional political space composed by the economic left vs right dimension, and a national dimension that opposes pro-Spain and pro-Catalonia positions. We find that the position of a hypothetical candidate on the national dimension exerts a great deal of influence on where respondents locate him on the left-right dimension: a pro-Catalan candidate is perceived to be more leftist than an equivalent, but pro-Spanish candidate. This effect is not symmetric, though, as the candidate's position on economic issues does not have a significant effect on the candidate's perceived position on the national dimension. In the second experiment, we further explore the mechanisms behind this asymmetry. We find that the national position also influences the perceived placement on a strictly economic taxes-services scale, although it does it to a lower extent than in the case of the generic left-right orientation, and only when respondents are given no information on the actual placement of the candidate on such scale.

Our findings have implications not just for voting behaviour and political representation, but also for party systems and party competition in multidimensional settings. The relevance of our conclusions, therefore, extends well beyond the case of Catalonia: in many countries, beyond the pervasive left-right dimension, a relevant second dimension of competition exists regarding, for example, EU integration, cultural issues, or religion (Hooghe and Marks, 2009; Kriesi et al., 2008). If voters project party positions to other relevant dimensions of competition, this limits ‘de facto’ the availability of strategic choices for parties. Parties and candidates cannot move freely on one dimension without risking being perceived as also moving on the other and thus, perhaps, facing reputational trade-offs.

The article is structured as follows. Section 2 sets up the theoretical framework on how voters use issue positions to infer positions across dimensions. Section 3 describes the case and the experiments used to test our expectations. Section 4 presents the results, and section 5 discusses the implications of our findings.

## **2. Inference across Issue Dimensions**

Political parties differ by their issue positions and by their distinct aggregation of issue positions into alternative policy packages. Voters, by choosing among them, can cast meaningful votes. Voters’ perception of party placements is, therefore, central to the linkage between public opinion, representatives, and policies.

Voting and representation theories often assume that voters perceive party positions accurately or, at least, exogenously – that is, voters’ perceptions are not affected by voters’ preferences. For instance, issue and spatial models of voting postulate that there exists a meaningful relationship between the ideal points of voters and the programmatic positions of parties (Downs, 1957; Merrill and Grofman, 1999; Rabinowitz and Macdonald, 1989). The party linkage model (Budge et al., 2012; Dalton et al., 2011) and congruence-based theories of representation (Miller and Stokes, 1963; Weissberg, 1978) also demand from voters an accurate and non-biased perception of parties’ positions. Otherwise, elections and representation would lack substantive meaning.

However, parties’ policy positions are not self-evident. Voters may misperceive parties’ positions, and parties may also be deliberately ambiguous about their positions as an strategy to maximize votes

(Bartels, 1986; Downs, 1957; Page, 1976; Shepsle, 1972). The scarcity of information and the high costs of acquiring it impel voters to rely on heuristics to infer party positions. Heuristics can take different forms. Party affiliation is one of the most decisive ones: knowing the candidate's party helps voters to figure out where the candidate stands on issues (Conover and Feldman, 1989; Lodge and Hamill, 1986; Rahn, 1993). The party's attachment to a social group may also provide cues (Converse, 1964). In multi-party contexts, additional sources of cues may come from parties revealing their preferred partners during election campaigns – coalition signals – and final coalition agreements – coalition behaviour (Adams, Ezrow, and Wlezien 2016; Falcó-Gimeno and Muñoz 2017).

Associations derived from group stereotypes have also been pointed as a source of heuristics. Even non-political group categories, such as gender, race, and religion can be a very relevant source of cues, particularly in candidate-oriented elections. Research in the US context has found that female candidates are perceived to be more liberal than ideologically similar male candidates (Koch, 2000, 2002; McDermott, 1997, 1998). Similarly, black candidates are judged as more liberal than white candidates (Jacobsmeier, 2015; McDermott, 1998; Sigelman et al., 1995), whereas evangelical candidates are considered more conservative than mainline Protestants which, in turn, are perceived as more conservative than Catholic and Jewish candidates (Jacobsmeier, 2013; McDermott, 2009).

Ironically, the literature has largely ignored the potential of issue positions themselves to function as heuristics to infer positions on other issues or issue dimensions.<sup>2</sup> Do citizens use 'what goes with what' strategies to infer positions across issue dimensions?<sup>3</sup>

The general understanding is that where parties and candidates stand on issues is precisely one piece of information that voters often lack and aim to infer when engaging in category-based processing (Conover and Feldman, 1989). However, there are reasons to believe that policy positions may constitute a consistent basis for drawing inferences on other, seemingly unrelated, policy dimensions. Firstly, because policy stances are generally stable (Conover and Feldman, 1989), a characteristic that other sources of cues share. Secondly, because information on where parties stand is uneven across

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<sup>2</sup> Some studies look at inferences from parties' and their candidates' positions, and vice versa, on the same issues (Conover and Feldman, 1989; Feldman and Conover, 1983). They find that individuals draw issue inferences from parties' ideological labels, and also that voters project their own issue positions to those of their preferred candidates.

<sup>3</sup> Converse (1964) argued that it is elites who combine issues into left (liberal) and right (conservative) packages. These packages subsequently diffuse through the public, though only the politically aware pay enough attention to elite discourse to learn 'what goes with what' (Converse, 1964).

issues. Parties provide more detailed information on some issues for strategic reasons (Page, 1976; Shepsle, 1972), whereas media privilege the report of some policy debates vis-à-vis other policy debates. Voters themselves are also particularly attentive to those issues that matter most to them (Conover and Feldman, 1989). This asymmetry may lead voters to use their more certain perceptions about the candidate's position on an issue to infer its position on another issue in which they have a more uncertain perception.

As the most pervasive and, frequently, most salient political dimension, left-right positions constitute the most evident source of issue positions. Left-right orientations constitute a sort of 'super-issue' that summarizes positions on the political issues of greatest personal concern (Dalton et al., 2011; Fuchs and Klingemann, 1990; Inglehart and Klingemann, 1976; Klingemann, 1979). Its specific content varies significantly across individuals, space, and time (Dalton et al., 2011: 81–108; Klingemann, 1979; Knutsen, 1995, 1997; Mair, 2007; Sani and Sartori, 1983). This flexibility has allowed left-right positions to encompass issues that result from new conflicts such as those derived from the 'new politics' agenda and adapt its meaning (Kitschelt and Hellemans, 1990).<sup>4</sup>

Two mechanisms may produce that logically unrelated issues come to be linked to each other in voters' minds. First, issue bundles may be learned from the information environment, as conveyed by party leaders and activists (Carmines and Stimson, 1989; Converse, 1964; Noel, 2013; Schattschneider, 1960; Vries et al., 2013). The specific combination of positions of the main parties in each dimension may affect voters' perceptions on how positions on these dimensions relate to each other. For instance, if the main party that promotes a national project is also a left-leaning party, some voters may deduce that there is a connection between these two positions (Noel, 2013).<sup>5</sup> Party elites may decide for strategic reasons to establish a connection between stances on two independent issues. These processes establish mental pictures that may both serve as a source of cues to face the lack of relevant substantive information as much as a source to bias perceptions.

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<sup>4</sup> A number of works attest to the emergence of a cultural, more context-specific dimension alongside the economic left-right dimension, one that captures issues as diverse as the defence of traditional values and attitudes towards immigration (Kriesi et al., 2006, 2008; Marks et al., 2006). The (in)ability of the left-right dimension to accommodate the political contestation over European integration has also been amply discussed (Marks and Steenbergen, 2002).

<sup>5</sup> Noel (2013) argues that two main elite groups play a role in deciding which issue coalitions should be formed. On the one hand, lawmakers create party platforms by supporting one policy in exchange for the support of another policy in order to get a parliamentary or an electoral advantage. On the other hand, intellectuals aim to create ideology by arguing that some issue positions are constrained by policy positions on another dimension.

Second, in addition to party-driven processes of issue bundling, voters may come to relate issue positions based on their affection towards the parties and social groups associated with them. Numerous evidence shows the existence of the so-called projection bias, which can be split into two non-mutually exclusive conditions: assimilation and contrast (Sherif and Hovland, 1961). While voters may locate the parties they like closer to their personal ideal point – assimilation bias –, they can also push away from their personal position the parties they dislike – contrast bias (Granberg et al., 1988; Grand and Tiemann, 2013; Judd et al., 1983; Krosnick, 1990, 2002; Miller et al., 1986; Rahn et al., 1994).<sup>6</sup> These biases are the result of individuals’ repairing strategies to overcome the psychological discomfort that cognitive inconsistency produces: when two salient cognitions do not fit together people change one of them or engage in other repair strategies to maintain psychological consistency (Abelson and Rosenberg, 1958; Festinger, 1957; Heider, 1958; Osgood and Upshaw, 1955). These biases should also reflect across issue dimensions. Cross-dimensional projection effects would mean that voters who are closer to a party on any given dimension will tend to perceive it closer also on the other dimension (assimilation) and vice-versa (contrast).

Both party-driven processes of issue-bundling and projection bias would suggest that inferences across issue dimensions are symmetric: issue positions on one dimension should function both as cue-givers and as cue-receivers with respect to positions on any other issue dimension. However, we believe that the different nature of political divides moderates their capacity to provide and receive cues from other issue dimensions. Asymmetries should, therefore, be expected. Specifically, whereas the left-right divide is a highly abstract and distinctively political dimension, the national divide is linked to deeply-felt symbols and shared social characteristics, such as cultural background and mother tongue, giving rise to strong group identities. This difference becomes apparent in political socialization processes and the transmission of values and identities within the family. Evidence shows that left-right orientations take longer to develop and are less successfully transmitted from parents to children than national identities and, in consequence, children appear to take cues from parental national identities in order to locate themselves on the left-right dimension (Rico and Jennings, 2012, 2016). Similarly, we expect issue stances on the national dimension to serve as group cues that trigger systematic biases in the perception of party placements on the left-right dimension.

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<sup>6</sup> Assimilation bias is stronger and dominates the contrast bias (Granberg and Holmberg, 1986; Krosnick, 2002; Merrill et al., 2001). It is this asymmetry that reinforces the mainstream conception that the main driver of projection bias is the general attitudes towards the parties rather than the specific attitudes towards the issues.

In this paper we aim to assess whether and how voters use party positions on an issue dimension as a heuristic device to locate parties on other issue dimensions. Based on the previous discussion, we can state three main expectations. First, we expect voters to infer parties' policy positions across dimensions: when given information on where a party or candidate stands on one issue dimension, they will make inferences about its stance on other, seemingly unrelated dimensions. Second, we expect this process of inference to be somewhat asymmetric. While both dimensions may work as cue-givers and cue-receivers, we should expect left-right orientations to be particularly sensitive to cross-dimensional effects, while issues more firmly embedded in readily apparent social and cultural categories should be less likely to be affected by left-right orientations. And third, to a certain extent, projection bias will work across issue dimensions, i.e., voters should assimilate or contrast parties on one dimension depending on whether they are close to them on the other dimension.

### **3. Empirics**

In order to test these expectations and provide causal evidence on the process of inference of party positions across issue dimensions, we conducted two survey experiments in Catalonia. Below, we describe the case and discuss why it is an appropriate test-bed for our argument. Then, we present the data, the experimental design and the measurement of the relevant variables.

#### **3.1 The case**

Catalonia constitutes a clear case of a multidimensional political space structured by the pervasive left-right dimension, with parties from the radical left to the right, and a national divide alongside which parties range from pro-independence from Spain to pro-centralization, with several intermediate positions.

National cleavages have long been regarded as particularly impervious to the all-encompassing nature of the left-right dimension. There is no logical argument that necessarily relates a position on the left-right dimension to a stance on a national divide, that is, having a left or a right position does not logically constrain the position on a national conflict (Freedon, 1998). In contrast to religious or urban-rural cleavages, 'the left-right super-issue has never summarized positions on questions related to regionalism, nationalism, and ethnicity at any point in the 20<sup>th</sup> century' (Albright, 2010: 714). Wherever there is a national conflict, political competition acquires a distinct character due to the emergence of regional parties that compete along a specific territorial dimension, increasing party system fragmentation (Jeffery and Hough, 2003). Therefore, by using the Catalan case, we can test issue inference across dimensions in an ex-ante difficult context.



The Catalan party system has traditionally been depicted as the by-product of two cross-cutting divides: left vs right and pro-Spanish vs pro-Catalan parties. The former is primarily an *economic* dimension dealing with the degree of state intervention in the economy, encompassing issues such as the provision of public services, the welfare state, taxation, and regulation, though it may also include cultural value orientations related to tolerance and secularism. The latter deals with alternative national projects and the structuring of political authority across the state's territory: pro-Catalan parties aim to empower Catalan self-governing institutions, whereas pro-Spanish parties aim the continuation of Spanish-wide authorities' rule in Catalonia (Elias et al., 2015: 843). The existence of these competitive dimensions (Sani and Sartori, 1983) has allowed voters to choose among parties from all possible combinations: left and pro-Spanish, left and pro-Catalan, right and pro-Spanish, and right and pro-Catalan.

The existence of two distinct and cross-cutting dimensions of conflict in Catalonia does not imply that they are fully orthogonal. As a matter of fact, the orthogonality assumption of the Catalan party system was challenged by Dinas (2012), who found through observational evidence that there was a certain correlation between voters' pro-Catalonia positions and left-leaning positions. Indeed, if we look at survey data, we find a clear correlation in this direction: using data from the Catalan government survey research institute<sup>7</sup>, we find that left-leaning respondents tend to be located towards the Catalan end of a Catalan-Spanish nationalism scale (there is a significant correlation of -0.35). Conversely, when asked about where they perceive the parties to be located, there is a correlation in the same direction: respondents that perceive any given party as leaning to the left, tend also to locate it towards the Catalan-end of the national scale.

However, little is known about the mechanisms that drive such an association. The origin of the link between the two dimensions is probably related to a historical process of monopolization of Spanish patriotism by the Spanish right and, more specifically, by the Francoist regime. The conservative forces were also linked to a strong Spanish nationalism, while the left was historically more open to decentralization. Even if during the first decades of the democratic period the association between right-wing ideology and Spanish identity weakened significantly, it never faded completely, and it revived from the early 2000s onwards (Muñoz 2009).

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<sup>7</sup> CEO Political Opinion Barometer. 2nd wave 2018

This historical association might produce the observed correlations through two different processes. One is an expansion in the meaning of the left-right dimension to integrate national issues into an all-encompassing ‘super issue’ (Vries et al., 2013). In that case, the labels ‘left’ and ‘right’ would incorporate also national content. An alternative possibility is that the identification of right-wing positions with Spanish nationalism serves as a basis on which citizens build stereotypes, which are then used as heuristic devices to infer parties and candidates’ positions across dimensions (cross-dimension inference).

Our experimental design allows us to properly separate among these possibilities.

In our empirical strategy, we contemplate the possibility that the national dimension is somewhat bundled with the left-right dimension, as an alternative mechanism to the cross-dimension inference of party positions. For this reason, we use alternative measures of left-right placements in two distinct experiments. The first experiment measures the impact of our treatments on the traditional left-right scale, whereas the second one focuses specifically on the economic component of the left-right dimension, so we can rule out that national issues are being subsumed by the left-right ‘super issue’ and tap directly into the cross-dimension inference.

### **3.2 Experiments**

We conducted two survey experiments to examine how candidates’ positions along one dimension influence voters’ perceptions of the candidates’ position on the other dimension.

The first experiment was conducted over a sample of 1,837 adult Catalans from an online commercial panel managed by the company Netquest.<sup>8</sup> The sample was quota-balanced by gender, age groups, and the province of residence to match actual distribution of the Catalan voting population.<sup>9</sup> Experiment 2 was conducted in October 2014. Respondents were drawn from the same Netquest panel using sex, age and province quotas. The number of respondents (N) was 1,004.

Both experiments use the same treatments and share the same design, the only difference being in the use of an alternative outcome variable in the second experiment, as we discuss below. The two experiments follow an incomplete factorial design where the positions of a hypothetical candidate on

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<sup>8</sup> Detailed information on how respondents recruitment, sampling and panel management can be found here: [https://www.netquest.com/hubfs/Netquest%20Oct%202016/Files/esomar28\\_en.pdf](https://www.netquest.com/hubfs/Netquest%20Oct%202016/Files/esomar28_en.pdf)

<sup>9</sup> Data can be consulted and downloaded from here: <http://ceo.gencat.cat/ca/estudis/registre-estudis-dopinio/estudis-dopinio-ceo/societat/detall/index.html?id=4768>

the economic and national dimensions are manipulated. The manipulation consisted in presenting respondents with a vignette about a hypothetical but plausible candidate to a regional election: male, aged 45, physician and with a long political career behind. To alter the candidate's position on the economic dimension, respondents were presented with different stances about the role of the state regarding public spending and welfare services. In turn, we manipulated the candidate's stance on language and sovereignty to modify the candidate's position on the national dimension. The manipulations regarding the candidate's left-right and national placement were conceived to avoid identification with any specific political party.

Respondents are exposed to three different conditions related to each of the two dimensions. With regard to the economic left-right dimension, the treatment shows a candidate that either takes a clear stance on the left-right dimension (pro-economic left or pro-economic right) or shows no information related to the left-right stance of the candidate (control condition). With regard to the national dimension, the treatment presents a candidate that either takes a clear stance on the issue (pro-Catalan or pro-Spanish) or provides no information related to the issue (control condition). Table 1 contains the specific text used for each of the treatment manipulations, whereas Table 2 shows the combination of the two treatments leading to the eight conditions to which individuals are randomly assigned. The control  $\times$  control cell was deliberately left empty as irrelevant, for such combination would provide no relevant political information on which to base ideological inferences.

Table 1. Texts used in experimental manipulations

<b>Common introduction</b>	
Imagine a candidate to the Catalan parliament elections. He is a man, 45 years old, practitioner and with a long political career behind.	
<b>National dimension</b>	
Pro-Catalan	"He has stood for Catalan language and the self-government of Catalonia, and he currently supports the right to decide of the Catalans"
Pro-Spanish	"He has distinguished himself as a champion of the Spanish language in Catalonia, and about the unity of Spain. Currently, he questions the pro-independence project and he is in favour of Catalonia remaining within Spain"
Control	No information on this dimension is provided
<b>Economic dimension</b>	
Left	"He always stood for the welfare state and public services, and he is strongly against privatizations and austerity policies"

<b>Right</b>	“He always stood for the minimum intervention of the State on the economy, tax-cuts and to limit public services to those absolutely essential”
<b>Control</b>	No information on this dimension is provided

Table 2. Experimental conditions

<b>Economic dimension</b>	<b>National dimension</b>		
	Pro-Catalan	Control	Pro-Spanish
Left	1	2	3
Control	4	–	5
Right	6	7	8

After showing the vignette, in the first experiment respondents were asked to place the candidate on a left-right scale, running from “left” (0) to “right” (10), and on a national scale, running from “Spanish nationalism” (0) to “Catalan nationalism” (10). The answers to these questions constitute our dependent variables.

Given that the left-right dimension is a ‘super issue’ able to absorb almost anything, it could be argued that what voters are doing, rather than making inferences across dimensions, is simply subsuming the second-dimension onto the left-right continuum. In order to take this alternative into account, we designed the follow-up experiment that neglects this possibility. Its design is identical to the previous one with the single difference that respondents were also asked to locate the candidates on a 0-10 scale, expressing the traditional economic trade-off between improved public services and lower taxation. Therefore, one extreme of the scale in which respondents were asked to place the candidate was labelled “He advocates improving services even if it means paying more taxes”, whereas the other one was labelled “He advocates cutting taxes even if it means cutting public services.” By capturing perceptions on a specific economic dimension of the left-right scale, this post-test measure help us ascertain the extent to which the national placement of candidates has been subsumed by the left-right dimension or is just used by voters as a shortcut to infer the placement on an unrelated issue.

## 4. Results

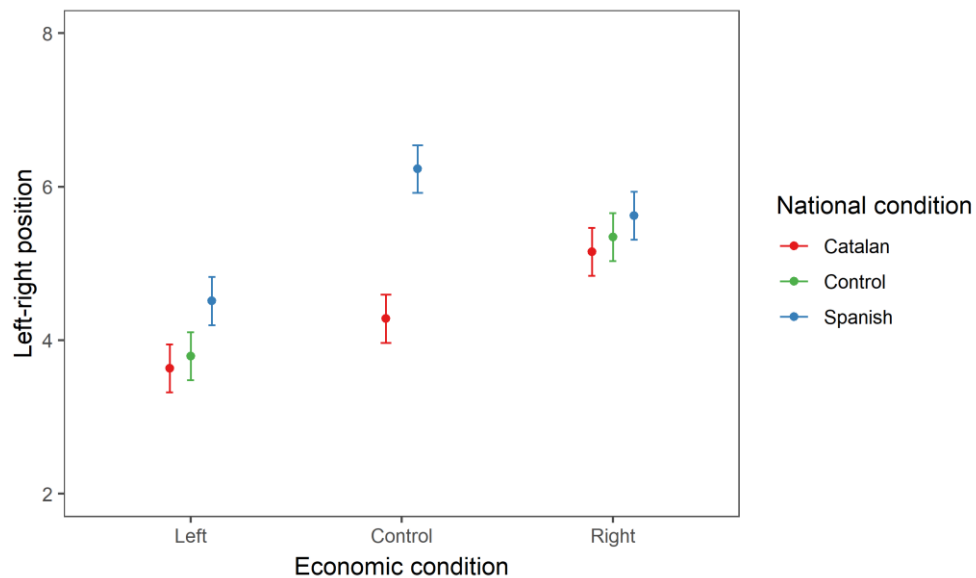
### 4.1 Main Results

Respondents’ placement of the candidate on the left-right and the national scales serve as a check for the corresponding manipulations. On average, the pro-Catalan candidate is placed at 2.8 on the

national scale, while the pro-Spanish is placed at 6.8, yielding a large and statistically significant difference ( $p < 0.001$ ). The effect of the manipulation of the economic position is smaller, yet highly significant: the mean placement of the left-wing candidate on the left-right scale is 4.0, compared to 5.4 for the right-wing candidate ( $p < 0.001$ ). These results thus provide strong evidence that our treatments work in the expected direction.

The key test for our argument lies on the relationship between the candidate's position on one dimension and respondents' placement of the candidate on the other dimension. Figure 1 displays the average placement of the candidate on the left-right scale for each experimental condition. Holding constant the economic condition, it becomes apparent that subjects exposed to the pro-Spanish treatment perceive the candidate to be more to the right than those exposed to the pro-Catalan treatment. The difference between the pro-Spain and the pro-Catalan candidate is 1.9 points for those who did not see any kind of economic information ( $p < 0.001$ ), 0.9 for those in the left condition ( $p < 0.001$ ), and 0.5 for those in the right condition ( $p < 0.05$ ). Therefore, there is a robust effect of the candidate's national position on how respondents place him on the left-right dimension, but the magnitude of the effect is contingent on the economic information provided—largest for the control group and larger for the left-wing candidate than for the right-wing candidate.

Figure 1. Perceived candidate position on the left-right dimension

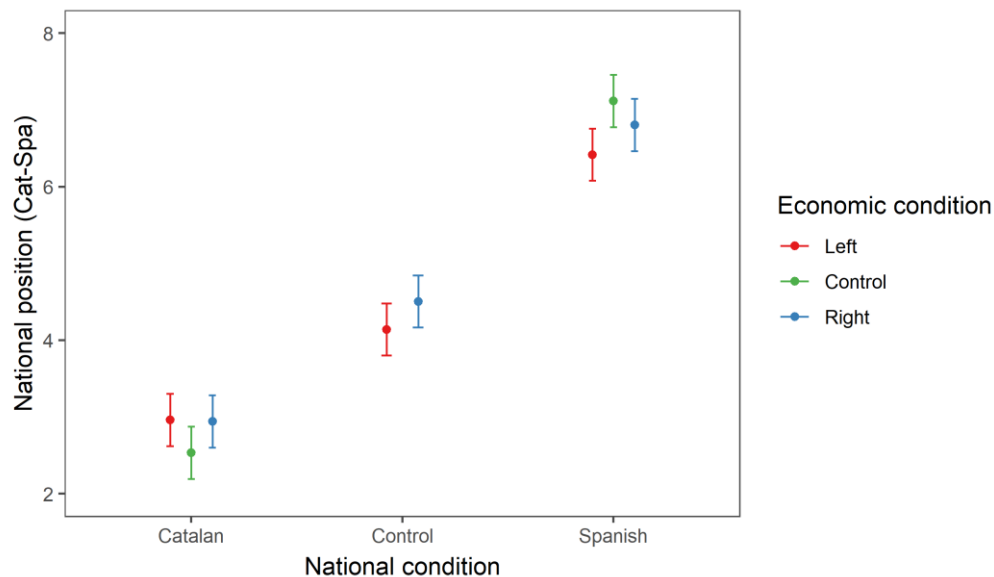


Group means with 95% confidence intervals.

Source: original experiment 1.

By contrast, there is no evidence of respondents' taking cues from positions on the economic issues to locate the candidate on the national scale. As shown in Figure 2, subjects in the pro-Catalan condition place the candidate nearly on the same national position regardless of the left-right treatment received. Among subjects assigned to the control and pro-Spanish groups, the left-wing candidate is perceived to be slightly more pro-Spanish than the right-wing candidate, but none of the differences is statistically significant ( $p > 0.1$ ). Our results thus reveal an asymmetrical pattern: voters use positions on the national dimension to infer positions on the economic dimension, as measured by the left-right scale, but the economic dimension is not used to infer a candidate's placement on the national dimension. We discuss potential explanations for this asymmetry below.

Figure 2. Perceived candidate position on the national dimension



Group means with 95% confidence intervals.

Source: original experiment 1.

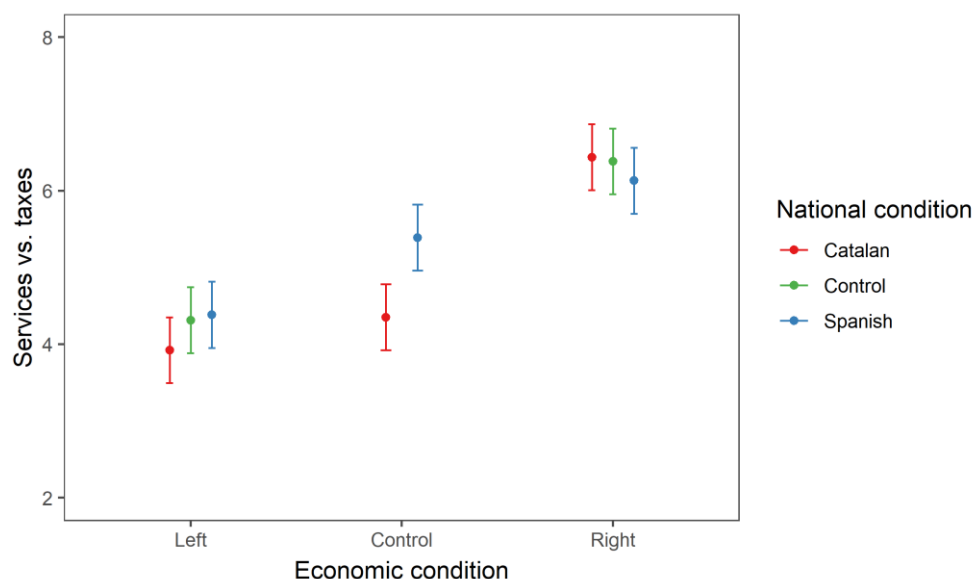
Are these results evidence of cross-dimension inference of issue positions, or they just show the ability of the left-right scale to subsume all sorts of issues? In our second experiment, we try to disentangle these two alternative explanations that, in our first experiment, yield observationally equivalent predictions. In this case, we replace the left-right scale by the services vs taxes scale, as described above.

Figure 3 shows how participants of our second experiment placed the candidate on the services vs lower taxes scale, broken down by experimental condition. Note that the scale is expressed in almost the same terms employed in the experimental manipulation of economic positions (see Table 2),

which leaves much less room for participants' interpretation. Indeed, the effect of the economic treatments on the candidate's placement is larger than it was when the conventional left-right scale was used, as the difference between the leftist and the rightist candidates' increases to 2.1 points on average ( $p < 0.001$ ).

However, when we look at the treatment effects across issue dimensions, no statistically significant differences are found between the pro-Catalan and the pro-Spanish candidates when respondents are given issue-specific information. In other words, a leftist (or rightist) candidate is not perceived to be more or less pro-services if it is presented as a pro-Catalan or pro-Spanish candidate. With more precise information, therefore, the two dimensions appear unrelated. However, respondents in the control group do tend to locate the pro-Spanish candidate one point more to the right (i.e., lower taxes) than the pro-Catalan candidate ( $p < 0.001$ ). These results demonstrate that voters, at least under conditions of low information, infer candidates' positions across issue dimensions, and not only within the same ideological domain. The results of the first experiment, therefore, cannot be attributed only to the ability of the left-right scale to absorb all sorts of issues, but they reflect an actual process of inference of policy positions across issue dimensions that is especially clear when relevant substantive information is missing.

Figure 3. Perceived candidate position on the services vs taxes dimension



Group means with 95% confidence intervals.

Source: original experiment 2.

## 4.2 Treatment heterogeneity

In order to better understand the nature of these ideological inferences, we use experiment 1 to examine how the effects of candidate positioning vary by respondents' national identity and left-right self-placement. This will allow us to test our third expectation, regarding assimilation and contrast.

Respondents' national identity was measured using a question asking respondents whether they felt "Only Spanish", "More Spanish than Catalan", "As much Spanish as Catalan", "More Catalan than Spanish", or "Only Catalan". Given its distribution, the variable was recoded into a dummy distinguishing the predominantly and exclusively Catalan from the others. Likewise, the conventional 11-point left-right scale was collapsed into two categories: left (0-4) and centre/right (5-10). This allows us to examine effects across four groups of individuals, on the basis of their positions on the two dimensions: predominantly Catalan leftists, equally or predominantly Spanish leftists, predominantly Catalan centrists/rightists, and equally/predominantly Spanish centrists/rightists.<sup>10</sup>

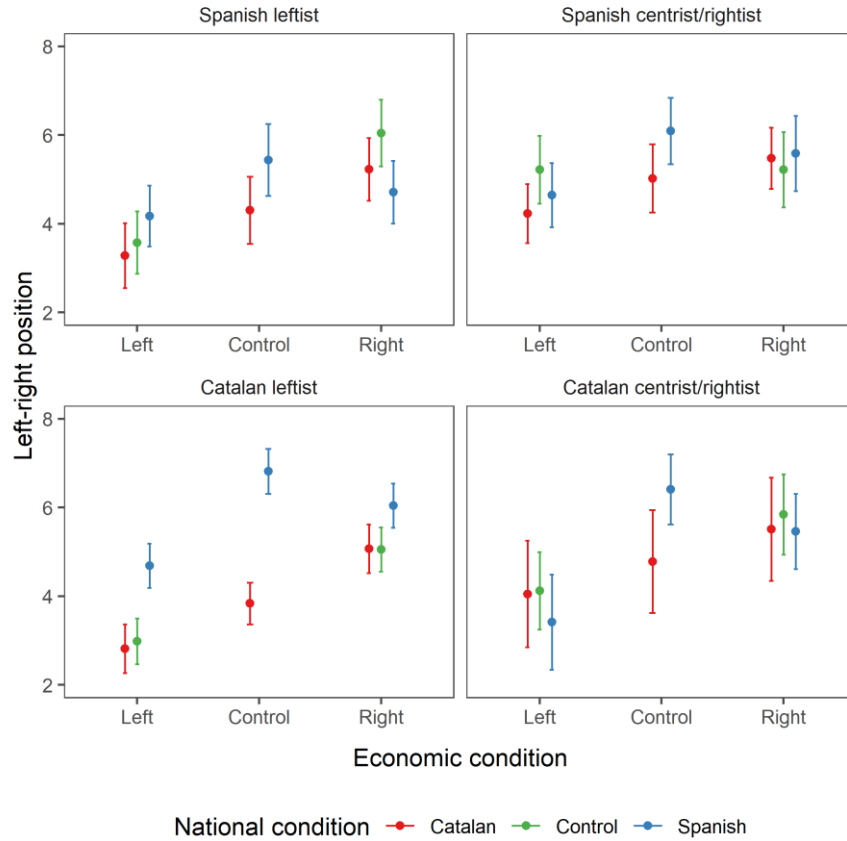
An economic condition  $\times$  national condition  $\times$  respondent's position ANOVA on the perceived position of the candidate on the left-right scale yields a highly significant interaction of national condition and national identity ( $p < 0.001$ ), which indicates that the influence of the candidate's national stance on how individuals perceive his left-right orientation is conditional on respondents' own national feelings. As displayed in Figure 4, the pro-Spanish candidate tends to be placed more to the right than the pro-Catalan candidate across the four groups, but it is among the predominantly Catalan leftists that differences are more pronounced, and consistently statistically significant regardless of the economic condition. Specifically, the difference reaches a high of three points for the control group ( $p < 0.001$ ), but is also substantial and statistically significant for those exposed to both the left-wing ( $p < 0.001$ ) and the right-wing candidates ( $p < 0.01$ ). The pattern is much more blurred among the three other groups.

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<sup>10</sup> The joint distribution of left-right orientations and national identities is the following: 45 per cent identify themselves as left oriented pro-Catalan; 22 per cent as left-wing pro-Spanish; 21 per cent as right-wing pro-Spanish, and 12 per cent as right-wing pro-Catalan.



Figure 4. Perceived candidate position on the left-right dimension by respondents' national identity and left-right placement



Group means with 95% confidence intervals.

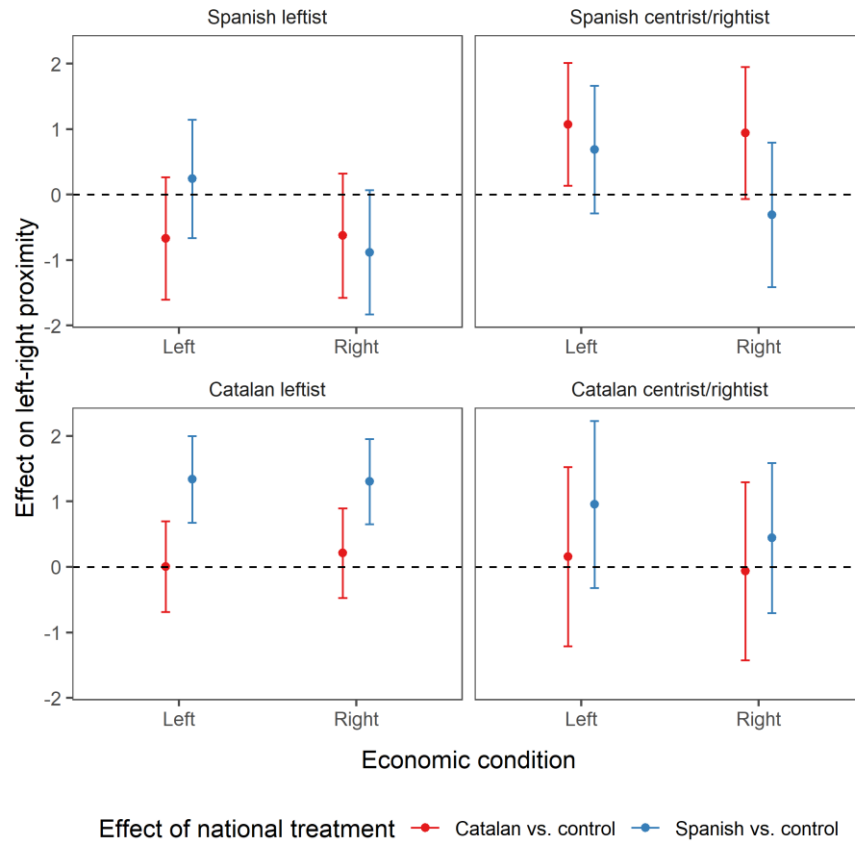
Source: experiment 1.

The results of the predominantly Catalan leftists clearly suggest the presence of contrast effects, at least among this group of respondents. In both the left and the right economic conditions, the left-right location of the pro-Catalan candidate does not differ from that of the control candidate, so it is the pro-Spanish candidate that is consistently placed further to the right. To further examine the extent to which the observed differences are being driven by projection biases, we replicated the analysis using the absolute distance between the respondent's self-placement on the left-right scale and the perceived position of the candidate on the same scale.<sup>11</sup> Figure 5 shows the effect of the territorial treatment (compared to the control group) across economic conditions and respondents' preferences. Results indicate that contrast effects are indeed present, but only among predominantly Catalan leftists and predominantly Spanish centrists/rightists. That is, the former exaggerate the distance to

<sup>11</sup> Just as respondent's national identity, left-right self-placement was measured prior to treatment assignment.

the Spanish candidate, whereas the latter tend to exaggerate the distance to the Catalan candidate. Therefore, it is only those voters whose political positioning on the two dimensions conforms to the issue-bundle stereotype that systematically distance the candidates of the opposite territorial camp on the left-right dimension. On the contrary, in our data we observe no assimilation effects whatsoever: when the candidate's position on the national dimension conforms to the respondents' identity, this does not cause the candidate to be perceived as closer to the respondent on the left-right dimension.

Figure 5. Effect of territorial treatment on perceived proximity to the candidate on the left-right dimension by respondents' national identity and left-right placement



Marginal effects with 95% confidence intervals.

Source: experiment 1.

## 5. Discussion

Several conclusions can be drawn from these results about the prevalence of inferences of candidates' positions across distinct issue dimensions. In line with our expectations, we found that voters take cues from a candidates' position on national issues to infer the candidates' stands on the left-right

dimension. Remarkably, the linkage remains, albeit to a lesser degree, for perceptions of the candidates' stands on a specific economic issue. Therefore, we can be confident that our evidence is not just the product of subsuming the national dimension into the left-right one. The evidence of our second experiment allows us to state that cross-dimension inference of issue positions actually occurs.

However, a prominent feature of our findings is the clear asymmetry in the cross-dimension inference that our experiments uncovered. Voters use positions on the national dimension to infer positions on the economic left-right dimension, but the latter is not used to infer a candidate's placement on the former. The national dimension, therefore, works as a cue-giver, whereas the left-right dimension works rather as a cue-receiver.

How can we explain this asymmetry? Although further research will be needed to attribute between the potential explanations, we can think of two possible mechanisms. The first one is related to the relative salience of each dimension. It may be the case that the most salient dimension in each context acts as a cue-giver and the least salient one as a cue-receiver. Although generally one would expect the left-right dimension to be the most salient one, in the recent context of Catalonia the national dimension has become the main source of political conflict and polarization.

However, an alternative explanation may be linked to the nature of each dimension rather than their relative salience. The two dimensions under investigation here are fundamentally different in nature. Stances on the national-territorial dimension can be related to readily apparent, affect-laden social-cultural categories with a clear connection with social groups. By contrast, the left-right dimension constitutes a more abstract, less affectively weighted construct. Being rooted on a social identity, the national dimension can shape stereotypes and group-attribution biases that become strong sources of cues for voters. Further research, perhaps focused on a wider set of cases, should establish if this is the reason behind the asymmetry in the cross-dimension inference we uncovered.

Finally, it must be noted that our results also reveal treatment heterogeneity. The experiments appear to confirm that cross-domain effects are particularly important among the more *stereotypical* voters (left-Catalan and right-Spanish identifiers). These groups seem to be affected by a projection bias that leads them to perceive candidates that are more distant on the national dimension as being more distant on the left-right dimension as well.

At least two important implications can be derived from our evidence. First, though heuristics may illustrate voters' and point them to the "right" answer, they may also misguide them. Group stereotypes are based on attributes that show a higher prevalence in a group than in the relevant reference group. However, they also amplify systematic differences between groups (Bordalo et al., 2016) and, in consequence, they can mislead citizens in important ways (Kuklinski and Hurley, 1994). Given the paramount importance of left-right proximity between voters and parties in shaping voters' choices, factors that may contribute to the misperception of parties' positions deserve close consideration. In the present case, the fact that a pro-Spanish candidate is perceived more economically to the right than an identical pro-Catalan candidate – or, likewise, a pro-Catalan candidate more to the left – might be affecting some voters' eventual decisions at the polls.

Second, recent research has addressed the strategies available to parties in contexts where political competition is defined by two cross-cutting dimensions (Elias, Szöcsik, and Zuber 2015). In a multi-dimensional policy space, parties' strategic behaviour (involving positioning, emphasizing, and framing) shape the connections between dimensions and this, in turn, affects voters' perceptions of the relationship between issue domains. However, as argued by Rovny (2015), how issue-linkages are established by the parties' strategic decisions can in certain cases be conditioned by structural determinants. Our results suggest that voters' own perceptions may function as such a determinant.

Specifically, persistent cross-dimension issue stereotypes, like the one uncovered in this study, might constitute a powerful constraint to the strategic decisions of political parties. This might be especially relevant for parties trying to build, for example, a left-wing but nativist (anti-immigration) reputation: voters' inference across dimensions might limit their ability to move on one dimension without affecting their reputation on the other one. Further research should assess to what extent this is actually the case, and to what extent this cross-dimensional reputational constraint operates as well in the opposite direction, for example to radical right parties' willing to moderate their economic stances without changing their position on the cultural dimension.

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## Appendix

Table A1. Treatment effects on perceived candidate position on the left-right and national dimensions (Study 1)

	(1) Left-right	(2) National	(3) Left-right	(4) National
Left-wing candidate	-1.28** (0.15)		-2.16** (0.32)	-0.68 <sup>+</sup> (0.35)
Right-wing candidate	0.11 (0.15)		-0.61** (0.23)	-0.31 (0.25)
Pro-Catalan candidate		-1.51** (0.16)	-1.67** (0.32)	-2.28** (0.35)
Pro-Spanish candidate		2.46** (0.16)	0.28 (0.23)	2.30** (0.25)
Left-wing candidate x Pro-Catalan candidate			1.51** (0.39)	1.11** (0.42)
Left-wing candidate x Pro-Spanish candidate			0.44 (0.32)	-0.02 (0.35)
Right-wing candidate x Pro-Catalan candidate			1.48** (0.32)	0.72* (0.35)
Constant	5.26** (0.12)	4.32** (0.12)	5.95** (0.28)	4.82** (0.30)
Observations	1837	1837	1837	1837

Standard errors in parentheses. Reference levels are control conditions (i.e. no information about candidate's position on the corresponding dimension).

<sup>+</sup>  $p < .1$ , \*  $p < .05$ , \*\*  $p < .01$

Table A2. Treatment effects on perceived candidate position on the services vs taxes dimension (Study 2)

	(1)	(2)
Left-wing candidate	-0.67** (0.20)	-1.33** (0.44)
Right-wing candidate	1.44** (0.20)	0.74* (0.31)
Pro-Catalan candidate		-1.29** (0.44)
Pro-Spanish candidate		-0.25 (0.31)
Left-wing candidate x Pro-Catalan candidate		0.90+ (0.54)
Left-wing candidate x Pro-Spanish candidate		0.32 (0.44)
Right-wing candidate x Pro-Catalan candidate		1.34** (0.44)
Constant	4.87** (0.16)	5.64** (0.38)
Observations	1004	1004

Standard errors in parentheses. Reference levels are control conditions (i.e. no information about candidate's position on the corresponding dimension).

+  $p < .1$ , \*  $p < .05$ , \*\*  $p < .01$

Table A3. Effects on position of, and proximity to, the candidate on the left-right dimension, by respondent's positions (Study 1)

	(1) Position		(2) Proximity	
Left-wing candidate	-3.19**	(0.76)	-2.38**	(0.70)
Right-wing candidate	-0.72	(0.55)	-0.49	(0.51)
Pro-Catalan candidate	-2.46**	(0.77)	-1.65*	(0.71)
Pro-Spanish candidate	-1.33*	(0.53)	-0.88 <sup>+</sup>	(0.48)
Left-wing candidate x Pro-Catalan candidate	2.17*	(0.93)	0.98	(0.86)
Left-wing candidate x Pro-Spanish candidate	1.93**	(0.72)	1.12 <sup>+</sup>	(0.67)
Right-wing candidate x Pro-Catalan candidate	1.64*	(0.76)	1.03	(0.70)
Spanish centrist/rightist	-1.04	(0.98)	-2.43**	(0.91)
Catalan leftist	-0.95	(0.80)	-0.68	(0.74)
Catalan centrist/rightist	0.03	(1.00)	-2.43**	(0.93)
Left-wing candidate x Spanish centrist/rightist	2.68*	(1.12)	1.74 <sup>+</sup>	(1.03)
Left-wing candidate x Catalan leftist	0.35	(0.92)	0.64	(0.84)
Left-wing candidate x Catalan centrist/rightist	0.52	(1.16)	2.78**	(1.07)
Right-wing candidate x Spanish centrist/rightist	0.21	(0.80)	0.01	(0.73)
Right-wing candidate x Catalan leftist	-0.05	(0.66)	0.22	(0.61)
Right-wing candidate x Catalan centrist/rightist	-0.23	(0.81)	0.87	(0.74)
Pro-Catalan candidate x Spanish centrist/rightist	1.76	(1.13)	2.01 <sup>+</sup>	(1.04)
Pro-Catalan candidate x Catalan leftist	0.48	(0.92)	0.30	(0.85)
Pro-Catalan candidate x Catalan centrist/rightist	0.45	(1.23)	1.12	(1.13)
Pro-Spanish candidate x Spanish centrist/rightist	1.70*	(0.81)	0.57	(0.74)
Pro-Spanish candidate x Catalan leftist	2.32**	(0.64)	2.19**	(0.59)
Pro-Spanish candidate x Catalan centrist/rightist	0.94	(0.82)	1.32 <sup>+</sup>	(0.76)
Left-wing candidate x Pro-Catalan candidate x Spanish centrist/rightist	-2.45 <sup>+</sup>	(1.34)	-0.27	(1.24)
Left-wing candidate x Pro-Catalan candidate x Catalan leftist	-0.35	(1.12)	0.37	(1.04)
Left-wing candidate x Pro-Catalan candidate x Catalan centrist/rightist	-0.23	(1.53)	-0.29	(1.41)
Left-wing candidate x Pro-Spanish candidate x Spanish centrist/rightist	-2.87**	(1.09)	-0.12	(1.01)
Left-wing candidate x Pro-Spanish candidate x Catalan leftist	-1.21	(0.89)	-1.09	(0.82)
Left-wing candidate x Pro-Spanish candidate x Catalan centrist/rightist	-2.25 <sup>+</sup>	(1.19)	-0.61	(1.10)
Right-wing candidate x Pro-Catalan candidate x Spanish centrist/rightist	-0.68	(1.09)	-0.44	(1.01)
Right-wing candidate x Pro-Catalan candidate x Catalan leftist	0.36	(0.92)	0.54	(0.85)
Right-wing candidate x Pro-Catalan candidate x Catalan centrist/rightist	0.04	(1.28)	-0.55	(1.18)
Constant	6.77**	(0.67)	3.96**	(0.62)
Observations	1583		1583	

Standard errors in parentheses. Reference levels are control conditions (i.e. no information about candidate's position on the corresponding dimension).

<sup>+</sup>  $p < .1$ , \*  $p < .05$ , \*\*  $p < .01$